

From Margin to Center: Reframing the History of Women in Computing and Information Technology through Oral Histories



An Oral History Interview with Ambika Dubey

Conducted by Bethany Anderson on November 3, 2017 in Room 308, Main Library,

University of Illinois at Urbana-Champaign

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Abstract: Born in Hayward, California, Ambika Dubey is an undergraduate student in the Department of Computer Science at the University of Illinois at Urbana-Champaign (B.S., 2018). In this this interview, Dubey describes her childhood growing up in California and India, experience as a Computer Science student, involvement in student groups and the local SWE (Society of Women Engineers) chapter, among other student groups, as well as her intellectual path that led her to want to pursue a career in computing.

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00:00:04

BA: Today is Friday, November 3rd, 2017 and I am Bethany Anderson from the University of Illinois Archives. I am here today with Ambika Dubey in Room 308 in the Main Library at the University of Illinois at Urbana Champaign to talk with her about her experiences as a computer science student with a minor in the Hoeft Technology and Management Program at the University of Illinois. This interview is part of the ACM-funded project, "From Margin to Center: Reframing the History of Women in Computing and Information Technology through Oral Histories." So, first of all, thank you for talking with me today, Ambika. First of all, let's talk a bit about your background and your childhood. Could you talk about where you grew up?

00:00:48

AD: Mm-hmm. Yeah. I was born in Fremont, California and I lived there until I was seven.¹ Afterwards, my family moved to Bangalore, India. So, all of us head over there where we stayed for four and a half-ish years. So, that was third, fourth, fifth, and sixth grade for me following which, we moved back to California. This time to Cupertino. I completed my middle school and high school there before coming to college.

00:01:16

BA: Do you have any siblings?

¹ Dubey was technically born in Hayward, California, but her family lived in Fremont at the time.

00:01:18

AD: Mm-hmm. I have two, an older sister and a younger brother. My older sister actually also went to University of Illinois as well.

00:01:25

BA: Oh. Okay. Are they also involved in computing as – professionally?

00:01:31

AD: Yeah, my sister graduated with a degree in computer engineering from the ECE department here and she's working with IBM in New York as of last – whenever it was that she graduated [laugh]. My little brother is actually quite young. He's seven years younger than I am so he's a freshman in high school right now.

00:01:52

BA: Oh. Okay. Alright, so let's talk a bit about your time in Cupertino. So, what kinds of hobbies or interests and subjects at school attracted your attention at that time and paved the way toward for your decision to pursue a technical career later on?

00:02:09

AD: So, it was interesting. In high school, I was involved in a whole host of different activities. Most of which were not actually related to computing. I took a lot of advanced placement courses that happened to be in STEM fields but that was also because the structure of my school was such that there was an intense focus on math and science. It was very common-place for students at my school to just take advanced coursework in those fields. However, in my extracurricular activities, I really focused on other sort of avenues such as language. I was very involved in the French Honor Society and then Speech and Debate as well as journalism. So very much more focused on liberal arts and the humanities in my extracurricular activities. And then for coursework, I definitely did take a lot of STEM fields. I was always really good at math.

00:03:09

AD [cont.]: Up until the point I got to calculus where I was like "Oh, my goodness! I don't know what's going on!" But even then, it was a fun challenge

for me. I was like, "I don't—I don't immediately grasp the subject so I'm going to have to work a little harder."

00:03:22

BA: Mm-hmm.

00:03:23

AD: "...spend a little more time." And I thought it was extremely fun by the end of the year so, it was still not something that I was, you know, getting the best grades in.

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BA: Mm-hmm.

00:03:31

AD: But it was definitely a class that I enjoyed.

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BA: Mm-hmm. Just to talk a bit about your time in India, could you talk about what that experience was like?

00:03:41

AD: Mm-hmm. Yeah. So, that was actually my first exposure to computing. In India we had to take—So, one very marked difference between my education in India and what it was like here, both before and after we moved, was we had—It was pretty common in the US to have a week—daily schedule, sorry. So, we have periods one to seven or zero to whatever the number is.

00:04:06

BA: [overlapping] Mm-hmm.

00:04:07

AD: And then depending that day, you have those classes in that order. In India,

we had a weekly schedule. So, not every day you'd be taking the same classes and then the total number of classes you take in a semester or in a year is just way higher.

00:04:27

BA: Mm-hmm.

00:04:27

AD: So, we had – Just to illustrate that fact, we had, for example, history, civics, and geography all as different classes. We had math one, math two. I think the difference between those were arithmetic and geometry. We also, interestingly enough, had computer science class. So, in my, I think it was fourth grade, third or fourth grade, where I had my first computer science class in which we started programming in Logo. Which was a very early language, I believe. I went back and researched it later [laugh] because I was like, "Oh, that was so strange that I actually started learning how to code back in elementary school."

00:05:07

BA: Mm-hmm.

00:05:08

AD: Pretty early in elementary school. So, I think it was created to be an educational tool, I might be wrong on that [laugh] but if my memory serves. And the way that worked was you're programming a little triangle on a screen, which is called "The Turtle." You're just programming its motion. We used it to draw different shapes and create different patterns on the screen. And my favorite thing about learning that language was that that was actually my first introduction to the concept of looping in code.

00:05:39

AD [cont.]: So, in order to create any kind of curved line you had to loop an increment and a turn over and over. That's how you draw a circle is just loop. You know, step forward one, turn right, step forward one, turn right. That was very, very interesting looking back. I think at the time, to me that was definitely one of my favorite classes. [laugh] I was like, "Oh, this is just cool! You know, I

can write my name on the screen!" And now looking back, I was like, "Wow. That was actually incredible. I actually learned this concept very early on."

00:06:14

BA: Yeah. [laugh] So, was there anything about learning to program in Logo that, besides learning how to loop, and do looping, that really was foundation for you in terms of – I don't know if – you mentioned this happened at third or fourth grade.

00:06:33

AD: [overlapping] Mm-hmm.

00:06:34

BA: That really took to you at that point and made you – you know, if you were to look back and think that, "Yeah, this is the point maybe I did have this insight that I'd want to go into a technical career."

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AD: Mm-hmm. I'd say it was probably not one of those instances where in the moment I said, "Okay, this is something that I'd want to pursue." To me, it just seemed like another class that I had to take and it just happened to be something that I was very interested in.

00:07:00

BA: Mm-hmm.

00:07:01

AD: So, I never sort of did activities on the side relating to computer science after that. In fact, all along I think originally, I had wanted to be a lawyer. And then in between I was like, "Oh, I really want to go into journalism." And perhaps do international relations and you know, learn a bunch of languages and go work in the UN. So, I've always had very much varied interests.

00:07:28

BA: Mm-hmm.

00:07:29

AD: And I never really felt like I had the one thing that felt like my calling until much, much, much later.

00:07:37

BA: Okay. Yeah. Talking about your high school years then, when you moved back to Cupertino, California, you mentioned (previously) that were involved in the French Honor Society, you got an interest in journalism at this time, so were there any particular classes in high school that sort of really made those interests blossom for you?

00:08:02

AD: Absolutely. So, for journalism, it was a class – it was a class that we enrolled in, I think you had to apply for it and then interview. If you pass all of that, then you are allowed to enroll. So that was certainly a class but the reason that I enrolled was more or less on a whim.

00:08:22

BA: Mm-hmm.

00:08:22

AD: [overlapping] I had a few friends who participated in journalism in years past and I saw that they were really enjoying what they were doing. So, kind of on a whim I was like, "Let me join this class." And I did and I never regretted it once. French Honor Society on the other hand, I had been learning French since fourth – third, fourth grade, again, I don't remember which and I absolutely fell in love with the language. So, throughout my years in India, and then also throughout my years in high school, I had been taking French classes.

00:08:56

BA: Mm-hmm.

00:08:57

AD: Now, I attribute so much of my passion for the French language to my high French teachers who ran an amazing French program in the school. It was just absolutely phenomenal to a degree that I cannot even articulate. So, every time I go back to visit my high school, I go back and visit specifically the French teachers. But they definitely, definitely imparted sort of an appreciation for the language itself and then an awe and appreciation for the culture. You know, just an intense curiosity for French.

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BA: Mm-hmm.

00:09:37

AD: That definitely increased my interest in French and then, they, along with my sister, encouraged me to join the French Honor Society.

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BA: Mm-hmm.

00:09:48

AD: A lot of things that I've done in life just happen to be, like, I would see my sister doing it and be like, "Oh! That's really cool; I want to do that!" [laugh] You know, two years from now, when I'm Didi's age. I call my sister Didi.² So, I think when I was still in middle school, I attended one of the French Honor Society events with my sister, because I was just going with my parents to pick her up and I saw a little bit of what they were doing at the event and I was like, "Wow, this is a really cool—very cool club to get involved in." So, I did as soon as I could, and then stayed with FHS for the rest of high school.

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BA: What kinds of activities did you do as part of the French Honor Society?

² Dubey's sister's name is Mahika.

00:10:27

AD: We did a lot of – so of course, some social events with the other folks in the French Honor Society. We also did a lot of sort of cultural immersion type of things. By that I mean, we did movie nights where we watched French movies. We did a fête du fromage which is like a cheese festival thing. We just brought a whole bunch of French cheeses.

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BA: [overlapping] Mm-hmm.

00:10:53

AD: And tried a whole of different cheese with cracker pairings.

00:10:58

BA: That sounds great! [laugh]

00:11:00

AD: It was really – it was amazing. And I love cheese so that was definitely an amazing event. [laugh] One of my favorites is, I think the first year that I was on the officer board for that club, we did a – we started – I forget the name of the event but essentially a collaboration with the Spanish Honor Society where we did some very interesting activities that we developed where we sort of had the students studying one language do activities pertaining to the other language. So, one particular noteworthy activity that I remember was we selected different passages from some of the texts that we were reading in class and we displayed those on the screen and we had people studying the other language try to read them.

00:11:48

BA: Mm-hmm.

00:11:49

AD: And it was very, very interesting to see how all of us spoke English and then also an additional language and so it very, very interesting to see how people with the same sort of background in English but just a different language in

terms of like a second or third language would read a different language. Which I feel like I sentenced that very strangely but that's okay. [laugh] So, it was — one thing that came about or one sort of learning that came about or one sort of learning that came about from that activity was that it was easier for the Francophones to read Spanish, as opposed to the other way around.

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BA: Hmm.

00:12:34

AD: So, to read it correctly.

00:12:35

BA: Yeah.

00:12:36

AD: The reason being, French just ignores half the letters.

00:12:40

BA: Yeah. [laugh]

00:12:41

AD: And so, it was very interesting seeing the Spanish students who are very much used to pronouncing you know, the “Es.”

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BA: Mm-hmm.

00:12:48

AD: Very much clearly.

00:12:49

BA: Yeah.

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AD: To reading French where we just ignore most of the "Es" [laugh]. We're like, "Oh yeah. That just doesn't exist."

00:12:58

BA: You were also involved in Speech and Debate in high school? Could you talk a bit about that experience?

00:13:07

AD: Mm-hmm. I think in my freshman year, one of my friends just told me to go and join the Speech and Debate team. So, I did. I walked into one of the meetings. Specifically, this was Lincoln Douglas, or LD Debate.

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BA: Mm-hmm.

00:13:23

AD: So, I walked in and then I sat in on you know, some of the captains explaining some ridiculous technique and I was like, "Wow. This is – this is really intense. Very, very intense." But I stuck with it, interestingly enough. So, first, second, and third year of high school, I did Lincoln Douglas which is a one versus one debate and all of the topics are more moral, ethical. A lot of frameworks and philosophies.

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BA: Mm-hmm.

00:13:55

AD: [overlapping] We read a bunch of really like fancy philosophers' works. Felt very pretentious but anyhow [laugh]. It was a good time. It was very, very interesting. I think one of the most interesting things from debate that I learned

was the way we wrote, sort of notes, during a round was very structured. It was called a flow. So, we had our case written all the way on the left in a very tight column and then throughout the debate as your opponent is talking you like write the specific points that address each point next to them and then you write your rebuttals next to that so you can actually just see very clearly, very logically the flow of arguments across the page.

00:14:36

BA: Oh. Interesting.

00:14:37

AD: Which is very interesting because at the very beginning, you present an entire case of arguments and throughout the discussion, the debate, some of the arguments get carried over in terms of-- "Okay. You know you have X amount of time you have to allocate between addressing these different points."

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BA: Mm-hmm.

00:14:53

AD: So, you didn't always address every single point so seeing sort of the flow of which specific points are addressed across the round was very, very interesting.

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BA: Hmm.

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AD: Yeah. So, my first three I did Lincoln Douglas and then my fourth year I did Public Forum, which is a partner debate. So, it's two versus two. Less structured, it is—and I think the topics are more widely varied so they range from you know, foreign policy to whatever really whereas Lincoln Douglas would always tie something back to something moral or ethical. And so, I think that was my involvement as an individual, I guess.

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BA: Mm-hmm.

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AD: [overlapping] And then I also got involved in the officer board for Speech and Debate as well. So, my third and fourth year, I was an officer and then it was the same for French Honor Society, third and fourth year.

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BA: What attracted you to Speech and Debate?

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AD: Initially, it was just I knew people on the team.

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BA: Mm-hmm.

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AD: I knew people on the team and one of my friends just said, "Hey, you'd be good at this. Go sit in on a meeting."

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BA: Mm-hmm.

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AD: So, I went and then what—So, that's what drew me in. What kept me there was definitely the, the people. So, the friends who I had made and the team.

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BA: [overlapping] Mm-hmm.

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AD: And then also just I really enjoyed having to research the different topics, sort of construct my own cases. So, we had to write both a pro and a con, so affirmative and negative case for each topic. And then again, seeing that flow of arguments across the page was very, very interesting to me.

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BA: [overlapping] Mm-hmm.

00:16:49

AD: Which I mean [stammers] I don't know if that, yeah. That was a very nerdy response, but that's okay. [laugh] Yeah, I really enjoyed a lot of the topics and having to do the research.

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BA: Mm-hmm.

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AD: It, you know, gave me a sense of. "Okay. I know a little bit more about what's going on in the world because I actually spent the time to do all this research and cut evidence from all these different sources." And actually evaluating the sources of the evidence was also just a very good sort of practice to get in the hang of. Which I mean is a useful skill.

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BA: Mm-hmm.

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AD: In any regard, like going forward doing any kind of research, having to evaluate the sources.

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BA: [overlapping] Yeah.

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AD: Very – very useful.

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BA: Mm-hmm. Mm-hmm. You mentioned (previously) that you eventually became president of Speech and Debate?

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AD: Mm-hmm.

00:17:38

BA: Could you talk about that experience and what you did in that role?

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AD: Yeah. So, it was definitely more administrative. So, I think what I enjoyed the most about Speech and Debate was the actual doing of it. And then, once I got into sort of the leadership positions and the team, there were a couple different routes for that. One was to be an event captain. So, I ended up being a Lincoln Douglas captain at some point. I think that was my third and or fourth year, definitely third. I might be remembering this wrong. But at some point both a captain and then also in like the management team.

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BA: Mm-hmm.

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AD: We called those management captains. That's where the president duties would fall. So being an event captain was more of a teaching role. So, you're actually teaching the novices or the sort of underclassmen, the people who are just joining the team, teaching them about what the debate style, how you actually have a debate in that structure. How to best find evidence, how to cut evidence and save it and use it in a round and just best practices that way. I

enjoyed that very much. I realized probably through that experience that I really very much enjoy teaching.

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BA: Mm-hmm.

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AD: I enjoy at the very least the human interaction of being in that role.

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BA: Mm-hmm.

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AD: On the other hand, being president, although it was an absurd honor, a huge honor to lead this you know, pretty large team, it was more, you know, emails, meetings, making sure that people are submitting paperwork, and then arranging things like that. Which again, I definitely recognize the importance of that and I understand how sort of yeah, really just the importance of the role and the you know, activities that I was doing to ensure the smooth running of the team. I found it less enjoyable than actually teaching.

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BA: Mm-hmm. [laugh]

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AD: And it was interesting because my experience in French Honor Society, even as president of that organization was very different from Speech and Debate because it was much less administrative, it was still more, "Okay. Us as the entire leadership team, we're just organizing these events."

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BA: Mm-hmm.

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AD: "And we're still attending them as general members." And you know, meeting face to face with the club members and all of that.

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BA: Mm-hmm.

00:20:18

AD: So, it was just a different experience.

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BA: Mm. In high school you talked about these emerging interests that you developed in journalism, speech and debate, and then also in learning the French language and culture. So, as you were nearing your senior year, and getting ready to think about college, how did those interests intersect at that time and ultimately lead you to pursue computer science at the University of Illinois? In other words, why did you pick computer science and also, to go to the University of Illinois?

00:21:00

AD: This is a fun story that I like to tell. [laugh] So, I talked a little bit about how what I loved about debate was the actual, you know, very logical flow of arguments across the page.

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BA: [overlapping] Mm-hmm.

00:21:16

AD: Literally. So, I liked seeing how you can have an argument and a counterargument and very clearly you can see that one would negate the other or you add another counterargument on top of that and then you have two minus one still one so you're still in that argument. Things like that. It was just very, very logical. What I loved about French Honor Society and just French in general, languages in general was the actual grammar and syntax and sentence structure.

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BA: [overlapping] Mm-hmm.

00:21:50

AD: And the bare bones structure of the language. So, growing up when I was learning Hindi, also it was very interesting to see that the, you know, the structure of a sentence is flipped. And I was like, "Oh." I would translate a sentence to English and it would make absolutely no sense translated word for word. [laugh] And I just found that very amusing, very compelling.

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BA: Mm-hmm.

00:22:12

AD: And I felt the same when I started learning French and gaining appreciation for the grammar and sort of the rules behind the language. What I loved about journalism, and so, in that regard, I joined the opinions section, so I was an opinions editor in charge of the editorials for our paper. And again, just going back to the notion that editorials being opinion pieces are essentially just you present an argument. So, very much like debate but this time it was presenting this argument in properly formatted, really nicely sort of wrapped package explicitly meant for consumption. So, if you don't you know, write a story that anyone will read, no one will read it.

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BA: Mm-hmm.

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AD: So, you have to be very conscious of the story-telling and then the actual page layout or the webpage layout depending on the sort of form of content.

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BA: Mm-hmm.

00:23:17

AD: That to me was very intriguing and I was trying to figure out how to do everything at the same time when I go to college. [laugh] I was like, "Oh my gosh! I don't want to leave any of this behind!" [laugh] And I just sat down and I realized at some point that, you know, what do I love about debate? It's the logic. What do I love about French? It's the grammar, the syntax, the structure. What do I love about journalism? It was, you know, having everything said right like just before, the logic and the structure and everything like that and then learning to actually package that for an audience. And so, I thought very hard about what I wanted to do and I finally arrived at computational journalism. So, after a lot of googling [laugh] I arrived at this, you know, fancy term for what a field would be.

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BA: Mm-hmm.

00:24:13

AD: And that just means computer science applied to journalism. So that would be something like natural language processing in the journalism field. So maybe like a Twitterbot or something like that.

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BA: Mm-hmm.

00:24:27

AD: So, then I was looking at colleges. I applied as computer science for all the colleges that I applied to and finally I was weighing between U of I and UT-Austin.

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BA: Mm-hmm.

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AD: Both of which are great schools. They have amazing programs in computer science. And then, also I, you know, pseudo-superficially went and looked up all

of the student newspapers [laugh] for all of the different universities that I was also looking to go to. And UT also has a really nice newspaper.

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BA: Mm-hmm.

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AD: At least their web presence was very nice when I saw it. I think they have a very strong journalism program too. Not that we don't here, but I was impressed with theirs. Ultimately, the decision came down to a couple different little funny factors. So, my sister, who's two years older than I am, she had come here and she was also in a computing field. I had heard stories from her about what she liked, what she didn't like, so I had like a good perspective on this campus.

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BA: [overlapping] Mm-hmm.

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AD: And the thing was that, coming from California and then, even my time in India and then back in California, everywhere that I've lived just had – has had really nice weather. [laugh] Like, objectively amazing weather.

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BA: Mm-hmm.

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AD: So, I know this is also in my sister's thought process when she was deciding college too but what I came down to was like, I knew that at some point, I'd be back on the West Coast. I'd probably end up in California.

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BA: [overlapping] Mm-hmm.

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AD: At some point in my life. At least, that's the goal right now.

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BA: Mm-hmm.

00:26:13

AD: So, I said, "Okay! I will, I will experience weather. [laugh] I shall experience weather. I will do it!" So, it was very interesting after my first year here, I came to the conclusion that California has two seasons. [laugh] It's just fall and spring and Illinois has the other two.

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BA: [laugh] That is a good way to put it.

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AD: Yeah.

00:26:38

BA: Yes. Yes, you are definitely experiencing the not so good weather here. [laugh] Unfortunately.

00:26:43

Ah: Yes, there's a full range. For sure.

00:26:45

BA: Yes.

00:26:45

AD: But now I can say that I've, I've lived summer where it snows and where it storms.

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BA: [overlapping] Right.

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AD: And there's thunder and lighting and everything's terrifying. [laugh]

00:26:55

BA: This is very true, yes. [laugh] Okay, great. So, since coming to the University of Illinois and experiencing the lovely weather, so have you – Could you talk about your coursework that you've taken here? So, what kinds of combination of courses have you taken to explore this area around computational journalism?

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AD: Mm-hmm.

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BA: And how has that, this is a second question – how has that interest evolved since starting?

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AD: Yeah, so I – Before I even came here, I had several different Google Docs and [laugh] sheets and you know, spreadsheets and whatnot, planning what my entire course and specifically even which RSOs that I would join. So, before coming in I decided I'm going to join SWE, Society of Women Engineers. I'm going to join WCS, Women in Computer Science.

00:27:52

BA: Mm-hmm.

00:27:53

AD: And then I told myself that I'd also try to get involved in ACM. So, the Association of Computing Machinery. And lastly, to pursue my interest in journalism, I would get involved in the Daily Illini. So, freshman year comes along I like get to campus and I join everything. [laugh] Literally everything on

my list [stammers] – Just you know, just checking things off. And I was very, very excited because I got in touch with the web – Sort of the Web Lead at the Daily Illini and I did some interviews with him and I specifically joined the web sort of section. We were in charge of just generally speaking, the web presence.

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BA: Mm-hmm.

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AD: So, [stammers] that was very interesting because that very, very early on. I think early September is, like I actually got a position.

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BA: Mm-hmm.

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AD: [overlapping] Which is ridiculous.

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BA: Wow.

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AD: I was like, "Wow! This is [stammers] that was very quick." Not at all what I was expecting. And then I also joined the other organizations that I had mentioned, I think. So, SWE, I joined the Professional Liaison Committee. And WCS I joined as a general member and then ACM I tried SIGAI, if I'm not mistaken.

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BA: Mm-hmm.

00:29:15

AD: That was also specifically to cultivate this interest in computational

journalism. I think I walked into the ACM office at some point and I asked some of the students there, I said, "Hey, this is what I'm interested in, sort of computing in the journalism field. I'm very fascinated with natural language and what we can do on the computing side to sort of interface with that. What is the best sort of SIG that you would suggest joining?" And they said, "Oh, go try out SIGAI." Or at the time, it was SIGART for artificial intelligence, now SIGAI. And so, I went to a few of the meetings. Over time I sort of stepped back in my involvement in ACM as well as the Daily Illini but that goes into how my interest evolved as well.

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BA: [overlapping] Mm-hmm.

00:30:02

AD: So, in terms of coursework which was the first questions, I've taken all of, all of the undergrad requirements so far except for two which I'll take next semester. [laugh] So, all of the core technical work, it's done already. My favorite of which was actually System Programming, which is CS 241. So, we – It's like a little more closely related to kernel level programming, little more lower level.

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BA: Mm-hmm.

00:30:38

AD: My favorite project from that class was making another sort of layer of abstraction over the Bash Shell which is the program that runs when you open up the terminal window. And just fiddle around with the actual – I don't know, it seems very intense when I do it. [laugh] I'm like, "Wow! Look at me! I'm fiddling with the actual computer." [laugh] And it was just incredible. I was like, "Wow. I actually wrote a program that reads and commands and actually makes pretty, pretty solid changes." You know, in return. So, that was, that was very fascinating to me. And then, more in terms of coursework as time went on, I was toying with the idea of going to grad school. And I – It's still definitely a goal of mine, just again paths have evolved. I'll touch on that in a second.

00:31:35

BA: Mm-hmm. Mm-hmm.

00:31:36

AD: In that vein I wanted to join a research group in CS and I wanted to also take some classes in that regard. Specifically, I approached one of the professors in the HCI group, sat in on some of her meetings, and got involved a little bit in one of the projects. This was, I believe, second semester my sophomore year. Towards the end of the year, I think I got involved pretty late, so I joined one of the projects that they were getting ready to submit a paper to one of the conferences. I actually created some of the graphics that ended up in the paper.

00:32:15

BA: Oh, wow.

00:32:16

AD: Which is very cool.

00:32:16

BA: Yeah.

00:32:17

AD: Uh—

00:32:17

BA: And which professor was this, if you don't mind?

00:32:18

AD: [overlapping] This is Ranjitha Kumar.

00:32:20

BA: Okay.

00:32:21

AD: Who's in the HCI group, in the CS Department. That was second semester in sophomore year and then my junior year I again kind of decided that that— that particular sort of involvement wasn't for me.

00:32:40

BA: Mm-hmm.

00:32:42

AD: So, stepped back on that front but then second semester last year, my junior year, I joined a project with Alex Kirlik, so, also in the HCI group. This time it was related to drones for the elderly, so again wildly different sort of feel but it was very interesting. I joined a project, I joined that project and I was also taking two 500 level classes actually.

00:33:13

BA: Mm-hmm.

00:33:14

AD: So, one with Brian Bailey and one with Alex Kirlik as well. Which I think were so phenomenal. The class that I took with Bailey was very much sort of what I was looking for in terms of, "Okay. I want to take a grad class so that I can figure out what grad classes are like and to see if that something that I'd want to pursue further." And that solidified my interests wholeheartedly. The final project for that class was in fact to do a full research project with a team, write a paper and submit to a conference which was very cool as an undergrad to get to sort of see that.

00:33:51

BA: Yeah. Wow.

00:33:52

AD: Entire cycle of a research project. And then, Alex Kirlik's class was statistics for HCI experiments or like, I think specifically it was called, Experimental Methods in HCI.

00:34:05

BA: Mm-hmm.

00:34:06

AD: So, it was all the statistical background that I needed to – which again is very incredible because then in the other course when we needed people to sort of do statistical analyses on the data we collected, I was a point person for that, which was ridiculous being the one undergrad, or I think one of two undergrads in our group.

00:34:24

BA: [overlapping] Mm-hmm.

00:34:25

AD: They were like, "Oh yeah. You know what you're doing." [laugh] So, I was like, "Yeah, I do! That's awesome!" So that was great. In terms of coursework that's some interesting stuff that I've done on that front. I'm also, as you had mentioned earlier, I'm in the Technology and Management Programs so that's a minor program joint with the College of Engineering and Business so, I've taken a lot of interdisciplinary coursework that way.³

00:34:51

BA: Mm-hmm.

00:34:53

AD: Very, very interesting classes. Also, some accounting and finance, which I thought that I would not enjoy.

00:35:02

BA: Mm-hmm.

³ Hoefft Technology and Management Program.

00:35:03

AD: But I enjoy them very much so and I remember a lot of the material, which is very interesting. Some interesting classes like Business Process Modelling, New Product Design and Development and Marketing. So just kind of skills that I knew that I wanted to have.

00:35:20

BA: Mm-hmm.

00:35:21

AD: Which is sort of why I applied and interviewed for this minor. One interesting thing is that through the minor, they offer a couple different avenues for international involvement.

00:35:34

BA: Mm-hmm.

00:35:34

AD: And I knew that I didn't want to study abroad at all during my time here but they do offer these winter programs that are – So, IBPC: International Business Plan Competitions, which are interesting. Very, very interesting actually. So, it's a joint program between our university and then four others across, actually four different, well, four total, us including so three different continents.

00:36:00

BA: Oh, wow. Okay.

00:36:02

AD: So, it's us from the US, University of São Paulo from Brazil, University of Bayreuth in Germany, and HKUST in Hong Kong. Hong Kong University of Science and Technology.

00:36:15

BA: Mm-hmm.

00:36:16

AD: And each year, each winter, they're hosted by a different university. Last winter, I participated in the IBPC in Hong Kong. The topic of which was Health Technology for the Aging Population. The interesting thing about that and the reason I bring it up is because the previous year, where I think it was hosted in Brazil, the topic for that was Drones and Drones Technology. And then immediately after coming back from winter break, I decided that I was really trying to get involved in research.

00:36:52

BA: Mm-hmm.

00:36:53

AD: And I just happened to find a project that was drones for the elderly. [laugh] And so, I was like, "Wow! This is a really wild sort of coming together of happenstance." And how it was – It was really interesting. Like, it was interesting to have sort of done that research already and then come into this project.

00:37:12

BA: Mm-hmm.

00:37:13

AD: You know, having a little bit of that background already.

00:37:14

BA: [overlapping] Right. Yeah.

00:37:16

AD: Yeah. [non-interview dialogue]

00:37:21

BA: Okay, great. I wanted to go back and just talk a bit about so, you came here with this interest in computational journalism, how would you, from that point to now – how would you define or characterize how your interests have evolved and solidified at least to this point? What – How would you describe your – how you are situated within computing as somebody who's involved, engaged in that work?

00:37:55

AD: Yeah. Okay, so as I had mentioned, I came in and then joined a couple different organizations to cultivate that interest. And I started taking the introductory courses. I think through those experiences, I – So, those coupled with a couple of different things. I realized that I didn't necessarily want to do computer science in a – in an industry that wasn't software focused.

00:38:26

BA: Mm-hmm.

00:38:27

AD: By that I mean I realized at some point, I don't want to be sort of you know, doing computer science in journalism.

00:38:38

BA: Mm-hmm.

00:38:39

AD: I'd prefer to be doing computer science in a computer science firm that happens to have applications elsewhere. So, and example of that would be like in a Google or Microsoft or something.

00:38:55

BA: Yeah.

00:38:56

AD: Some corporation where the primary output is software. And so, it was –

those organizations that I involved, and I that those experiences were definitely extremely valuable in shaping that, that decision along with just some more research that I had done and I had tried to find job postings and internship positions in computational journalism.

00:39:21

BA: Mm-hmm.

00:39:22

AD: And I just wasn't finding very much of that or the ones that I was...Wow. I cannot speak. The ones that I did find –

00:39:31

BA: Mm-hmm.

00:39:32

AD: Weren't as appealing to me or to me seemed limiting at the time.

00:39:40

BA: Mm.

00:39:41

AD: And by that, again, I mean, in the beginning of my college career I was really, really looking for breadth of experiences, of knowledge, of classes and coursework and everything. And so, the positions, the internship positions that I was looking for –

00:39:56

BA: Mm-hmm.

00:39:57

AD: I didn't want to specialize too early on.

00:40:00

BA: Right.

00:40:01

AD: So, that helped shape my current passions in the very specific that my very first internship happened to be in data infrastructure.

00:40:15

BA: Mm. Mm-hmm.

00:40:16

AD: So, I was working the summer after my sophomore year at a start up in San Jose called Nutanix and I was working on sort of writing some of the, like the data movement protocols. So, that was very interesting because I was writing scripts sort of from scratch or copying over from one existing document that was – That was there previously.

00:40:49

BA: Mm-hmm.

00:40:50

AD: And I was – So, if like if Script A moved data from Database X to Y my job was to write a Script B based on Script A that would move data from a completely different source to a completely different destination.

00:41:06

BA: [overlapping] Hmm. Mm-hmm.

00:41:08

AD: It was very interesting sort of figuring out all the configurations and actually you know, trial and errors and lot of –

00:41:13

BA: [overlapping] Mm-hmm.

00:41:15

AD: It was just a very fascinating to me. And then, I did a mini machine learning project for them as well on an interesting data set. So, it was very, very fascinating for me because I actually, I hadn't taken any coursework on machine learning or AI, or anything before. And I just I googled a lot of things and just figured out on a random test data set and then finally use that one theirs. So, it was – It was just a lot of very interesting stuff.

00:41:45

BA: Mm-hmm.

00:41:46

AD: I decided at that point that I really enjoy working with data. Not only because of sort of my sustained interests and maybe also, knack for, statistics, but also, just those experiences in terms of actually writing some of the data infrastructure for this company. Then when I was looking for further opportunities for the next summer, having worked at a smaller company I decided that I also wanted to get the perspective of a larger company.

00:42:19

BA: Mm-hmm.

00:42:21

AD: So, the summer after, this past summer, I worked with Microsoft and I actually did a very similar thing that I had been doing as what I had been doing in the previous internship but on a much, much, much larger scale. I was working on the Big Data Platform Team; working on a product that basically just oversaw all of the data pipelines for all of the AI powered tools. So, we were like crunching all of the AI data that went into Bing, Cortana, and Office.

00:43:00

BA: [overlapping] Yeah. Wow.

00:43:03

AD: Which was, in the moment it really didn't seem like that much because I was working on you know, my little – my little product. But it was very interesting having meetings with my manager and talking to the rest of the team and getting the perspective that this is actually running. It's like up and running and we're maintaining it and adding features to this for the rest of Microsoft to use.

00:43:25

BA: [overlapping] Mm-hmm.

00:43:27

AD: To make these –

00:43:27

BA: Wow. Yeah.

00:43:28

AD: Really incredible products. So, again, just absurdly humbling.

00:43:33

BA: Yeah.

00:43:34

AD: ...sort of experience. But that's kind of where my interest changed and how I grew and where it is right now.

00:43:39

BA: [overlapping] Mm-hmm. Mm-hmm. So, what programming languages have you learned since starting college?

00:43:47

AD: Since starting college, I've done – So, the first in college was Java.

00:43:54

BA: Mm-hmm.

00:43:56

AD: The first before college was actually, so the first real programming language not counting like Logo and the stuff that I had done –

00:44:03

BA: Right, yeah.

00:44:04

AD: Way early on. The first real programming languages that I had interacted with were C++, and then in college, Java.

00:44:13

BA: Mm-hmm.

00:44:14

AD: Back to C++ for a little bit and then dove into C. Those were probably the languages that I actually learned in a structured environment.

00:44:26

BA: Mm-hmm.

00:44:27

AD: In a class. And then I was told by some friend, when doing technical interviews, I was really struggling, I was trying to use C++ because that was the language that I was most familiar with.

00:44:39

BA: Yeah.

00:44:40

AD: One of my friends just told me, he's like, "Why are you using C++? Just learn Python and use Python for interviews."

00:44:45

BA: [overlapping] Mm-hmm.

00:44:46

AD: And so, I did. I was extreme – I remember being extremely frustrated at some point, I think I was trying to work on a problem with like hash table and it's a pain to set up the entire thing in C and remember, sorry, in C++, and remember all of the syntax and I was like, "Okay. Let me just look up the syntax for Python." And it was absurdly simple.

00:45:06

BA: Mm-hmm.

00:45:08

AD: From then on, I have been picking up Python and have been using that in interviews. And then, the first sort of internship, I primarily used Python. Oh, I just remembered I did actually use Python in a class. I lied. [laugh] I learned Python in a class as well.

00:45:27

BA: That's alright!

00:45:28

AD: Yeah, I'd say right now, probably, if someone were to ask me like what my go to language is –

00:45:34

BA: [overlapping] Mm-hmm.

00:45:35

AD: I'd be like, "Oh. If you wanted to me to just code something right now, just to test it out, I would definitely go for Python."

00:45:40

BA: Mm-hmm.

00:45:41

AD: Unless it were sort of more, like if I needed to do some wonky things with memory management, and stuff like that, then I would use C or C++, but, definitely right now if I were to just make something, I would test it in Python.

00:45:55

BA: Mm-hmm.

00:45:56

AD: It's very easy. I have definitely done that a couple of times, to create a text file on my laptop and just write some stuff in Python and run it and see if it works.

00:46:05

BA: Mm-hmm.

00:46:07

AD: Yeah.

00:46:08

BA: So, is Python your favorite programming language, or do you have a favorite?

00:46:13

AD: Probably right now.

00:46:15

BA: Mm-hmm.

00:46:17

AD: Oh, I also forgot I learned JavaScript and C Sharp in my last internship but anyhow. Yeah, I'd say probably. Probably my favorite would be Python.

00:46:31

BA: Okay. So, besides, or in addition to these internships that you've had where you've been able to do some really rewarding work, what kinds of scripts or programs have you created that – that you're the most proud of?

00:46:50

AD: I'm actually the most proud of a kind of a game that I had made.

00:46:56

BA: Mm-hmm.

00:46:57

AD: In my first actual programming class. So, this is the summer before college. In the first environment where I'm coding in C++ for real and the final – For the final project I made a game that kind of illustrated the importance of binary search. So, the program would randomly generate a number I think between one and 10,000. And the user is just, on a loop, supposed to try to guess the number. And the feedback is or so, the user guesses either greater than, equal to, or less than.

00:47:40

BA: Mm-hmm.

00:47:41

AD: And whatever number input that they guess and the program spits out a binary like yes or no. And so that, that illustrates binary search because you

could split the entire range in half. And then depending on if that's a yes or no, split that side in half and you know —

00:48:02

BA: Yeah.

00:48:03

AD: You always just divide the range in half until you get to the actual number.

00:48:06

BA: [overlapping] Mm-hmm.

00:48:07

AD: And that's the quickest way to guess the number. And that was very interesting because I was creating sort of different classes and you know, I created a leaderboard for that too. So, it would — You can enter the player's name and then it would save their highest I think three scores and then compute some statistics on their stuff. So, it would be like, "Oh, what's your mean and your median?" Your highest and lowest and I think you could have up to five players that it would save on the leaderboard. That was just very fascinating to me because that was like an actual functional program. Like you could run it and actually play it and that was very fascinating to me. But that was very early on as well.

00:43:56

AD [cont.]: I think in college I enjoyed, again back in the 241 class, System Programming, there was one class where we wrote a text editor. So, I actually created something in which you could actually create and save, you know, type in files. Which again, was absurd to me because I'm used to just opening you know, Microsoft word or some other text editor and it being nice and pretty and there already. [laugh] And I hadn't really considered the fact that there is actual code that makes this program run. It just seemed completely decoupled in my mind so that, that was pretty mind-blowing in the sense that I kind of gained that appreciation. That there is actual code that you know, that makes these things run.

00:49:57

BA: Yeah.

00:49:57

AD: It's called a program. [laugh] It's like, "Wow! Everything makes sense, it's so nice!"

00:50:04

BA: Okay, so I wanted to sort of switch gears for a minute and ask you about your work as an ELA.

00:50:12

AD: Mm-hmm.

00:50:12

BA: [overlapping] Which is an Engineering Learning Assistant. Right?

00:50:15

AD: Mm-hmm.

00:50:15

BA: And you have been an ELA for Engineering 100? Is that correct? So, could you talk about that experience and what you've done as part of your position?

00:50:24

AD: [overlapping] Yeah. So, this is, again, it's something that my sister had done.

00:50:30

BA: Mm-hmm.

00:50:30

AD: [overlapping] And she was telling me about that and I was like, "Wow! I

really want [laugh] to be an ELA when I get older." So, basically what ELAs do or what they are, is that they – It's kind of like a TA position in any other class. But we actually teach our own section, so we're kind of the instructor for a section and Engineering 100 is the intro class that all engineering majors or engineering, all students in the department of engineering – College of Engineering? College of Engineering! [laugh] All students in the College of Engineering have to take, or have to pass, Engineering 100 in order to get through the curriculum. So, what they do is they split them up, they split the students up into their different majors.

00:51:22

AD [cont.]: And you're put in a section for your major. So, for example, my section was Engineering 100 CS 3. So, the third section for CS. So as part of that, we introduce incoming freshman to all the different campus resources and we talk through the different levels of advising and talk about certain skills like, presentation skills and communication and teamwork, and provide them with a whole bunch of different options in terms of what they can do to structure their college careers in terms of study abroad, help with internships and things like that. So, again that was very much a rewarding experience for me.

00:52:10

BA: [overlapping] Mm-hmm.

00:52:11

AD: I really just realized that I love sort of the, not even necessarily specifically the teaching aspect but at least the very least, the mentoring. And I really, really – It's very important to me that, so it was very important to me that my students feel like they could approach me with any concerns or questions that they had and that they left the class with sort of a positive outlook on the next four years.

00:52:38

BA: Mm-hmm.

00:52:39

AD: And were excited about the classes that they were going to take, excited

about the different opportunities that they have, and that if they need any help along the way at all, that they feel empowered to seek out the resources that they need. So that was very, very important to me during this class. Yeah.

00:53:00

BA: Alright. You just mentioned you know that you really enjoyed this sort of mentorship role that you had as being an ELA. Have you also had any mentors in your time here at the University of Illinois? Or anybody you consider a mentor?

00:53:18

AD: [overlapping] Um, I'd say yeah. I would say so, as part of SWE. So SWE has two mentoring programs. One is internal and pairs underclassmen with upperclassmen and one is external so it pairs anyone in SWE with any professional. I've been involved a little bit in those not too much. I think my most memorable sort of memory – [laugh] That was weirdly phrased. Most memorable time that I have with the mentoring programs in SWE was when I was a mentor for the internal one. On campus though, there are definitely – So, there are a few professors in the CS department who really, really kind of like, I consider them my friends.

00:54:16

BA: Mm-hmm.

00:54:17

AD: And we're friends on Facebook, too. I'm like, "Wow! Like at me, so cool!" [laugh] One of whom is, has since left the University. She's now in Canada so, she's Cinda Herren.

00:54:30

BA: Oh. Okay.

00:54:31

AD: And another one was Anna LeValle. The reason that I just absolutely love these two professors or these two woman specifically, was that Cinda taught CS

225 when I took it and that was a really difficult class for me. I struggled a lot and I really just didn't ask for help when I should have. So, I learned a very hard lesson there. But I just walked into her office one day and we were just chatting about the most random things and I—it's just really amazing how she makes the most incredible effort to learn people's names and faces.

00:55:20

AD [cont.]: So, I had the briefest conversation with Cinda and then every time I saw her after that she was like, "Oh, hi Ambika!" And I was like, "Wow! I—that's—what? You remember my name?" [laugh] She's like, "Of course I remember your name!" [laugh] "Who do you think I am?" I was like, "Wow. That, that means so much to me." And that actually influenced sort of my teaching and leadership as well. I make the most ardent effort to learn people's names and faces. And you know, if I don't know your name and I see you around, I will ask for your name and you know, definitely remember that. So, there's that and then Anna was also teaching 225 when I took it.

00:55:59

BA: [overlapping] Mm-hmm.

00:56:01

AD: So, these two women were both working together to lead this class. Which again, was absolutely phenomenal, I think, for me seeing the first sort of CS class where I was really, really struggling with, and it's a pretty core, foundational class. Every CS major takes it, every CS minor takes it. And seeing not only one, but two women leading this class was absolutely incredible to me.

00:56:31

BA: [overlapping] Yeah. Mm-hmm.

00:56:33

AD: So, I made it a point to go and meet them. So, I did this for both of them and I just met them, walked into their office one day, said hi, and they both remembered my name and my face and that—that was just the most amazing thing for me. I've kept up with them actually. You know, we message back and forth and I—I've—I make it a point to go back and tell them, and I don't even

think they know. It wasn't really a tangible sort of mentorship thing that we had going but I make it a point every now and then to just send them a message and say, "Hey!"

00:57:07

BA: [overlapping] Mm-hmm.

00:57:08

AD: You know, "This is what's going on in my life. This is what I'm doing now and truly thank you so much for literally for just being there." And I can point to a couple of instances, one for either where that they really went out of their way to [stammers] to do something that left an impression on me.

00:57:28

BA: [overlapping] Mm-hmm.

00:57:30

AD: One was, in one of the years, I forget which one, one of my friends had passed away and so, Cinda actually went out of her way to send me a message. She literally- she just sent me a message, "Are you okay?" And that was absolutely incredible. I was like you know, "You clearly took time out of your day to see." What she had done is she looked up my friend's name and saw that we were mutual friends, so that's how she knew that I knew her and she literally just took time out of her day to you know, to make sure that I was doing okay. That— that left an impression on me for sure. And then for Anna, as part of Society of Women Engineers, one of the events that I was putting on was an alumni brunch for which we needed a keynote speaker and last minute, our keynote, so, the previous— the people that we had lined up for this keynote backed out last minute and so we were scrambling to find a replacement.

00:58:43

AD [cont.]: So, I just— I just sent her an email. I was like, "Hey, you know, we have— this is the situation and I would absolutely love if you could and if you can't, that's absolutely fine, too. That's not a problem. I absolutely know that it's short notice." But out of nowhere she was like, "Yeah. You know, I would love to.

That's amazing. And in fact—I already have a presentation prepared." I was like, "Wow. That's a very happy coincidence."

00:59:13

BA: Yeah. [laugh]

00:59:14

AD: And she came and she did the keynote while many months pregnant, too. [laugh] So, it was absolutely wonderful to see her.

00:59:21

BA: Mm-hmm.

00:59:22

AD: So, you know, my friend, my mentor, my professor. Like you know, somebody who's led a class that I took, really just go out of her way to come, and sort of be there when she really didn't have to.

00:59:39

BA: Right, yeah.

00:59:40

AD: And it was amazing because right after that event, so many people came up to me and they were like, "That was the best keynote for this event that I've heard in so long."

00:59:48

BA: [overlapping] Mm-hmm. [laugh] Mm-hmm.

00:59:51

AD: "Or like, at all." She did a very cool presentation on illusions. So, interestingly, being a CS professor, so she—She's actually incredible. She was one

of the foundational sort of chief scientists along with her husband, Steve LeValle, to [non-interview dialogue]

01:00:36

AD [cont.]: So, she and her husband, Steve, worked with Oculus, way at the start when they were sort of, you know, a very small team. And they both, I think they switch off leading the VR class here. So, along those lines, she did a very, very cool keynote.

01:00:54

BA: Mm-hmm.

01:00:55

AD: On Illusions and tricks that you can play on the human mind, but you know, visually. So, it was very, very cool.

01:01:05

BA: Okay, so, this might be a good point to talk about gender and computer science since you've mentioned these two faculty members who are both women and had a profound influence on you as a student.

01:01:18

AD: [overlapping] Mm-hmm.

01:01:20

BA: Could you talk just generally, to start with, what is it like to be a woman student in CS?

01:01:28

AD: Mm-hmm. I think—Of course, everybody's experience is unique. Mine is interesting because I do find myself taking a lot of interdisciplinary courses, so I perhaps don't feel some of the sort of the pressures or isolation that, that I know are prevalent in the field. And I certainly have felt, in the past, not that I haven't but I perhaps don't feel them as much as others or as I could. One thing that I

find very interesting is that I – or, the College of Engineering, of course, and the department of Computer Science, as well, has been really pushing to increase those numbers.

01:02:26

BA: Mm-hmm.

01:02:27

AD: So, increase numbers of women in computing and engineering generally. In my incoming class, I think we were at around 30% women.

01:02:39

BA: [overlapping] Mm-hmm.

01:02:40

AD: And then the number has steadily increased so that the current incoming class has like really nice numbers. I don't actually know the specific statistics but there was that. I definitely, during my, at least the intro courses, actually, even still, I do find myself being a minority in classes. So, I look around and I see a lot of – a lot of men in my classes and I'd see maybe a few women. I think it's gotten to the point, unfortunately, it's gotten to the point where it's just something that we're – we sort of get used to. And I shouldn't we, I'll speak specifically for my perspective. I haven't found it strange. Which, for better or for worse, you know, whatever that says.

01:03:37

BA: Mm-hmm.

01:03:38

AD: I haven't necessarily found it strange. There have, however, been a couple of instances where I had an interaction or a conversation or something where I was like, "Wow. This – this was absolutely unacceptable. And I don't know how to respond in the situation. So, I'll just leave." Yeah, there were, I think, the first, you know, instance that I remember very clearly was in – I think it was second semester of my freshman year where I was just in a class and maybe just a

handful of women and we were just kind of scattered all around the class and there just guys filling in the gaps everywhere else.

01:04:23

BA: Mm-hmm.

01:04:24

AD: And this one guy was just being absurdly obnoxious to me. And I really didn't know how to respond because I, of course, never – I'd never really you know, been in a situation where people said strange things to me. But it got to the point where I was extremely uncomfortable in class and I was looking at sort of the course schedule to see if there were other discussions that I could go to and join because I just did not want to even be around this – this guy. I would get anxious every week. I'd be like, "Oh, this class is coming up. I have to go to this discussion section. I'm gonna be – you know, this guy is going to be there and it's going to be terrible." But eventually, I told myself, I like, "You know, no. I'm not going to switch my schedule to avoid this person that's – that's admitting defeat and I will not!"

01:05:23

BA: Mm. Mm-hmm.

01:05:24

AD: "[stammers] I will be stubborn and I will go and stand my ground." So, I didn't go to a different section but it was – it was still frustrating because after you know, even telling this person that what he's saying is making me uncomfortable and I don't appreciate these comments and whatnot, it still persisted. So, it was an unfortunate situation that I just kind of, for the sake of getting through the class and also, myself just being stubborn and not wanting to go to a different section, I sort of stuck with it. So, yeah. [stammers] There was that.

01:06:04

AD [cont.]: Perhaps the most disturbing thing about that whole scenario though is that there was one other woman at my table, in my table group. And even after I was very much visibly uncomfortable and distressed, she would actually laugh

and egg him on and I just felt the most betrayed. In that situation and I was like, I just had no words. I was like, "Wow. I do not know how to respond to him and particularly so, the fact that you know —" I don't know, I guess I expected a degree of sort of comradery or —

01:06:48

BA: Mm-hmm.

01:06:49

AH: Mm-hmm.

01:06:49

AD: ...something that I was just not getting. So, that was — that was very disturbing to me. As I think most people would expect.

01:06:55

AD [cont.]: Yeah. Yeah.

01:06:55

BA: [overlapping] Mm-hmm. Yeah.

01:06:57

AD: So, that's the — A little bit on the negative side. One time, I think this was my sophomore year, someone asked me, he was like, "Oh, so, as a woman in computer science, do you ever feel pressured to drop out?" I was like, "What? What kind of question is that? Would you — ask a guy this? Like, clearly not because this is clearly a very much gendered topic."

01:07:22

BA: Mm-hmm.

01:07:24

AD: "And it's the reason why you're asking me." But I just gave him a funny

look, and I was like, "No. What?!" So, [stammers] just a couple of instances that jump out at me.

01:07:36

BA: Mm-hmm.

01:07:37

AD: But again, these aren't— These are definitely not like, you know, practices or conversations that any the department or the college, endorse, obviously. And they do make a huge effort to make the women in both the College of Engineering and the department feel welcome.

01:07:58

BA: [overlapping] Mm-hmm. Mm-hmm.

01:08:00

AD: So, on that note I'd say that for me the biggest thing was joining the organizations that I joined. So, specifically, SWE and WCS. And even then, I— I've sort of stepped back on my involvement in WCS and just really stepped up my involvement in SWE. But what I've found over the years which is again very much intangible, and I was just thinking about this, I think last year one of the other SWE members, I was talking to her in the SWE office and she mentioned how incredible this was that when she thinks of— we're all like, alerted of the stigma or not necessarily the stigma but like the idea that traditionally engineering is a male dominated field.

01:08:48

BA: Mm-hmm.

01:08:49

AD: And it's— it definitely still is. But what she was telling me, and what really resounded with me as well was the fact, just as a direct result of being in SWE and being surrounded by all of these really amazing, driven, passionate, qualified, smart, and intelligent women engineers in all different fields, so there are people from every major. When I think of a chemical engineer, I think of one

of my friends in SWE. Not some you know, unnamed vaguely man figure.
[laugh]

01:09:27

BA: [laugh] Yeah.

01:09:28

AD: I, you know – When I think of a computer science person – I think of myself or I think of you know – Another woman in computer science who I know from my organizations or through classes or whatnot. I mean, it's the same for probably every, almost every, let's say just so, I, you know. Almost every major.

01:09:49

BA: Mm-hmm.

01:09:50

AH: Mm-hmm.

01:09:51

AD: In the College of Engineering and even in STEM generally, we have people who are chemistry majors and you know, not necessarily engineering majors.

01:09:59

BA: Mm-hmm.

01:10:00

AD: But I think of, somebody says, you know, "Mechanical engineering," I don't think of a male engineer, I think of a female engineer. Which is – I, when this person was telling me about this – I just thought that that was just the most phenomenal thing ever. [laugh]

01:10:18

BA: Mm-hmm.

01:10:18

AD: And yeah, I really do think that that's changed a lot of my perspective and in very intangible ways. So, I seek or I had sought those communities on campus, where I, you know, through SWE, through WCS and through other things, through my friend groups and whatnot, just happened to find groups of really, really passionate, driven, intelligent, just amazing women in technical fields.

01:10:50

BA: [overlapping] Mm-hmm.

01:10:51

AD: So, despite any, you know, of the one-off instances here and there, I always have a really nice support system that I can go back. You know, I can go back home and I can tell my roommate like, "Oh, my goodness! This ridiculous thing happened today!" And she's like, "Oh, my gosh! That's so absurd!" [laugh] So, it's really nice that through even you know, even despite whatever instances —

01:11:15

BA: Mm-hmm.

01:11:16

AD: Or just the fact that there are more men than women in my classes or in my internships or in industry or you know, in the world in general.

01:11:24

BA: Mm-hmm.

01:11:25

AD: I sort of still feel very much like I belong. And I have — this whole sort of support system and a whole bunch of people cheering me on and telling me that I can do it.

01:11:38

BA: That's really great.

01:11:39

AD: It's definitely – yeah, very, very nice to have.

01:11:42

BA: Mm-hmm. So, this is probably a good point to talk more about SWE and also, I wanted to ask you a bit about WCS, Women in Computing – Computer Science, sorry. So, could you talk about WCS and what you did as part of that organization?

01:12:03

AD: Yeah, WCS has a whole bunch of different types of events that they put on. They do mock interviews. They do, you know, office hours. You could go in for help with a class, or anything like that. My, I think my most important contribution to WCS was probably just through their outreach program.

01:12:31

BA: Mm-hmm.

01:12:31

AD: [overlapping] So, they – They had this event; it was like an overnight, like a weekend outreach event called, it was the “Chic Tech Workshop.” I might have butchered the name. [laugh] But it was an overnight, like weekend long retreat where there were girls from, I want to say high school. It might have been middle school and high school, or maybe just middle school but some range of K through twelve [laugh] sort of girls came to campus and they had – We, you know, offered a bunch of different workshops. There were different talks. There were panels and also some social activities and then they all stayed overnight, camped out in Siebel. So, what I did is I volunteered for that event and I actually led an HTML CSS workshop.

01:13:29

BA: Mm-hmm.

01:13:30

AD: With one other, I think she was a PhD student, if I'm not mistaken. Master's

or PhD student. So, the two of us were leading this workshop for their final project. We were guiding them through making a personal website. Which was so much fun. Again, it had the teaching aspect and the mentoring aspect. And I got to talk to the girls one on one and really get to interact with them as they were making things happen on their webpage, which was so nice to see.

01:14:00

BA: Mm-hmm.

01:14:01

AD: It was absolutely incredible. So, that— that was probably the biggest thing that I ever did with WCS. I go to some of their events here and there. I was just at their, like their Halloween Social with WECE, Women in ECE, which I'm actually, interestingly enough, I think I go to more WECE events this year. [laugh] Just because all of my friends are in ECE.

01:14:25

BA: Mm-hmm.

01:14:26

AD: This semester, a lot of CS friends have actually graduated.

01:14:31

BA: Mm-hmm. Alright, so, let's talk about SWE or the Society of Women Engineers.

01:14:36

AD: Mm-hmm.

01:14:37

BA: During your time as a student here at Illinois you've been involved in the local SWE chapter and you had mentioned that you initially became involved on the Professional Liaison Committee, is that correct?

01:14:48

AD: [overlapping] Mm-hmm. Mm-hmm.

01:14:51

BA: Yeah, could you talk about your initial involvement on this committee on and your trajectory from there?

01:14:56

AD: [overlapping] Yeah. So again, this was one of the organizations that I knew that I was going to join before coming in. Again, it was one of those organizations that I joined because my sister had two years previously. [laugh] And very specifically, the Professional Liaison Committee is one, it was the committee that I joined also because my sister was on that committee when she was in SWE. I joined that committee. I applied for a chair position, did all of the interviewing and finally got the position of Undergraduate Relations Chair. So, I was a co-chair.

01:15:33

BA: Mm-hmm.

01:15:34

AD: And my co-chair and I, our responsibility was basically to do anything, so, hold workshops or panels or whatnot that undergrads would find relevant. So, we did a Strengths Quest Workshop which is kind of like a personality leadership style kind of evaluation sort of thing. That was very interesting. We did a study abroad panel, for example. We had the Director of the Technology and Management Program come in and give a talk on the program to gauge interest or increase interest in that program, as well. We were in charge of the research database that we have. So, updating which professors are looking for undergraduates to work with and then making that available to the rest of SWE.

01:16:32

BA: [overlapping] Mm-hmm.

0:16:34

AD: Yeah. So, those were a little bit of an overview of the events that I did as Undergrad Relations Chair and then, in my sophomore year I decided that I wanted to stick with the same committee. So, I applied for PL, applied again for a chair position. And I specifically wanted to develop the same chair position. So, I went back as an Undergraduate Relations Co-chair again and this time again, did a lot of the same events. The next year, as we had done previously but I really wanted to try my hand at creating a new event. So, carving out sort of a new event that would be something that I would make from the ground up. I got in contact with somebody from OTCR and somebody PwC and we worked together to bring some professionals and talk about women in technology and their⁴ –

01:17:33

BA: Mm. Mm-hmm.

01:17:34

AD: Um, so, their sort of employee research or, sorry, resource group called WIT, Women in Technology. They did a fantastic sort of workshop module and then we cohosted with Women in – the Society of Women in Business, as well. They did a fantastic workshop on cultural diversity and communication and they had a couple of videos that were really amazing and they actually showed those same videos at an event that they had this year with us. Which was really cool because I went up and talked to the same people who had come for our event two years prior.

01:18:14

BA: Mm-hmm.

01:18:14

AD: [overlapping] Or one-year prior. I'm a senior year now, that's two years. [laugh] Two years prior. They were [stammers] even they remembered who I was. I was like, "Wow!" [laugh] "Wow! This is amazing!" But it was really, really great to you know, have that ownership of an event.

⁴ PricewaterhouseCoopers (PwC).

01:18:31

BA: Mm-hmm.

01:18:33

AD: And also, just from those two years as a chair in SWE, I really, really developed a lot of my professional communication skills. So, I wasn't necessarily, I was never sort of shy about public speaking or talking to professionals or anything like that but emails were always a little awkward for me because I would reread them seven times before I'd send them. [laugh] I couldn't ever really gauge how, how formal I was supposed to be in an email and then, out of nowhere, like what? Now professors reply with smiley faces? That's ridiculous! [laugh] So, it was very interesting coming to college and seeing that, for one. And then also, developing the skills associated with just—

01:19:24

BA: Mm-hmm.

01:19:25

AD: Emailing professionals. And I really, really attribute that to SWE, for giving me the leadership, the ownership, and stretching those skills. Following those two years as a chair on the Professional Liaison Committee, I applied to be the Professional Liaison Director, so the Committee Director. So, my junior year I did that. And by this point, I find myself leading the committee. Again, I really, really enjoyed that year as director. SWE is notoriously pretty intense on its officer board and exec board, in terms of time commitment. So, it was definitely not easy at all. I was going to a lot of events. So, we have these things called HPEs, high priority events where we require everybody on the officer board to actually attend.

01:20:25

BA: [overlapping] Mm-hmm.

01:20:28

AD: And the reason being, for certain events that we designate as HPEs we, you know, you want a strong showing of people actually attending the event. So, whether these are corporate events, where we have, you know, a company come

and talk to us, this is a company that's actually sponsoring our section. We want to show that, you know, our appreciation so we require everyone to go. I forgot where I was going with that sentence. But anyhow —

01:20:56

BA: Mm-hmm.

01:20:58

AD: So, it was definitely a huge time commitment. But, I absolutely loved what I was doing because it felt, again, it was the mentorship aspect, much less of the teaching but this time, I was, you know, I was giving to my committee members those experiences that I had had — That allowed me to grow so much in the two years prior. I really emphasized or I tried to, I don't know if I am qualified to say that I did [laugh] or not but I really, really tried to emphasize ownership for the chairs. So, for example, I would, I would tell the mentoring program chairs and so, my committee ran the external mentoring program. I would tell them, "This is, this is yours. You do with it what you want."

01:21:49

BA: Mm-hmm.

01:21:50

AD: "And what you see working, write it down. What you see not working, write it down. Write everything in your chair reports so we can work on it. We can change and morph the program however you like. Because again, I don't know these events or these programs as well as you do. Why? Because you're the chair and it is really your work." So, I tried — I tried really hard to emphasize sort of the ownership and then, you know, foster an environment where people comfortable with learning, growing, and making those mistakes, and doing whatnot. So that was extremely, extremely rewarding to me. And I cannot articulate enough how proud I was by the end of the year. I would gush about my committee members to anyone who would listen. [laugh] I'd be like, "Oh, my goodness! So-and-so did this phenomenal job."

01:22:48

AD [cont.]: "And so-and-so was contacting these people to get this event together

and it was just so amazing to me to see how passionately this person was talking about this thing that they're doing." And everyone you know gets along and it's just, I, oh, my goodness, I would gush about them so much. [laugh] So, all of my roommates knew my committee members by name. [laugh] And they had never met them. Like, "Oh, this is that person?" I was like, "Yeah! You remember." I got very, very excited for them. So, and I still am. I see them around campus and I'm like, "Oh, my goodness!" You know, "How are you doing in class?" One of them asked me to be a reference for some position that she was trying to apply for.

01:23:30

BA: [overlapping] Mm-hmm.

01:23:30

AD: I was like, "Hands down, absolutely, yes! Oh, my goodness!" And I ended up not actually being contacted for that reference but she got the position and she reached out to me. She was like, "You know, I got the position. I just wanted to say thank you so much." I was like, "Girl, I didn't do anything. This was all you!" [laugh] "And I'm so proud and so happy!" So, I—yeah, that year as a committee director was so, so rewarding for me just because you know, the, I think the adage or whatever it is that you know, my, like, their successes are all theirs. Like their, their failures reflect on me and like I'm, you know, be there to help and rectify any situation but any success they have is 200 percent theirs, I really, really felt and I was so happy by the end of the year.

01:24:24

BA: Mm-hmm.

01:24:25

AD: Anyhow, I just gushed to you guys. [laugh] So, it was the same as anyone else.

01:24:30

BA: Yeah. [laugh] So, after your work as the director of the Professional Liaison Committee, you became the president of SWE, which is what you now are?

01:24:42

AD: Yeah.

01:24:43

BA: Could you talk about your work and experience so far in that position?

01:24:47

AD: Yeah. So, again, this is going to go way back to my experience on the Speech and Debate Team. The two different avenues of leadership and seeing the difference between the two. I would liken being a, like an event captain— To being a committee director and then being a management captain to being a president, or really anyone on exec, on the executive board. So, the structure of SWE is such that there are, so there's the executive board. And we are the president, external vice president, internal vice president, secretary and treasurer. Just by nature of those roles we do more of the administrative things that need to get done. Then, there's the rest of the officer board. So, this comprises of all of the different committee directors as well as the webmaster and the grad SWE director.

01:25:46

BA: Mm-hmm.

01:25:49

AD: Nominating committee is a little bit ambiguous but they're a separate committee and they're in charge of the election process for the next year. So after, so, every committee director is in charge of a committee under which falls a bunch of different other chair positions in addition to general members. That's how the giant structure of the organization is.

01:26:10

BA: [overlapping] Mm-hmm.

01:26:14

AD: As a committee director, you have direct interface with sort of other members of SWE. So, like the underclassmen or the chairs. Or even,

upperclassmen who are, happen to be chair positions, or in your committee whereas on exec, I don't have a committee anymore. Or I guess like the way I could think about it as like the officer board is the committee that we're in charge of or supporting. I now do, so I do a couple things. Specifically, my role is in charge of handling the chair application process. In the very beginning of the year. And also, planning and executing all conference logistics. So, every year we attend the – the annual society conference. This year it was in Austin and I was actually there last week. I just arrived back on campus on Sunday night. So –

01:27:17

BA: Big temperature difference, I'm sure! [laugh]

01:27:19

AD: Yeah. So, it was interesting, the first couple of days that we were there it was hot and then the last two, it got cold.

01:27:23

BA: Oh, okay.

01:27:24

AD: It was like a nice gradual coming back to the cold.

01:27:26

BA: [overlapping] Yeah. Good for the transition back to Illinois, I guess. [laugh]

01:27:31

AD: Yeah. So, in terms of conference logistics – That was like, managing flights, hotels, and buses, and public transportation, and all of this stuff for 40 undergraduates and also working with the Grad SWE director for the ten graduate students that we were also taking.

01:27:54

BA: Wow. [laugh]

01:27:55

AD: [overlapping] So, 50 total and making sure that nothing exploded, [laugh] nothing was on fire. Nobody got lost, you know.

01:28:03

BA: Mm-hmm.

01:28:03

AD: [overlapping] We didn't leave anybody in Champaign before going. [laugh] We didn't leave anybody in Austin before coming back. That was very stressful, very much. It was a good time when we were at conference. And nothing did explode, so [laugh] I think I did my job.

01:28:18

BA: That's good.

01:28:19

AD: So that's good. But yeah, it was incredible because I had started working on conference stuff last year in April. So, I think the election was in March for the SWE board for the next year and then starting in April we started doing transition meetings. So, the old officer has meetings with the new officer to sort of hand off responsibilities.

01:28:43

BA: Mm-hmm.

01:28:44

AD: And just pass on any of the tacit knowledge that maybe isn't in the actual reports that we write. So, I was given this giant document about, you know, all the things. [laugh] And it was bequeathed to me [laugh] and, as well as some Google Drive folders that had a bunch of different logistics already planned out. And then, immediately we hit the ground running and started calling hotels and asking for quotes and figuring out flights and uh— And bus transportation and public transportation in Austin as well. So, seeing all of that come to fruition last week was, it was absurd. I think I, as soon as we, as soon as we landed in

Chicago, like wheels touched the ground, we're still going really fast on the runway [laugh] slowing down, I turn to one of my friends and I was like, "We made it." And I had tears in my eyes.

01:29:37

BA: Aw.

01:29:38

AD: And I was like, "We all made it and everything is good and this was—" It was, it was an extremely satisfying sort of feeling to— To reach home again, and this is after my last conference that I'll ever attend as an undergrad collegiate. So, it was something special. Yeah, so, that's one thing as well.

01:30:01

BA: Mm-hmm.

01:30:02

AD: Figuring out all of the logistics for chair positions and approving those appointments and then the entire daunting task of conference logistics. And then interspersed throughout, so even starting from last year and definitely this is going to be something going forward as well. For the rest of my tenure as president will be managing relationships. And by that, I mean having meetings with people in the College of Engineering, the administrative offices, deans. Contacting departments, which I'm actually still doing, in the process of doing. So, it's, it's pretty interesting. I don't think I would have ever expected. I don't think I would have ever imagined that I would be in, at a point, in undergrad at the very least, or ever, honestly speaking, where I'd be you know, just shooting emails to these just very important people.

01:31:01

BA: Mm-hmm.

01:31:03

AD: And in my mind, I'm still, I'm still just a student, like it was— It's, yeah, it's just a very absurdly humbling experience.

01:31:13

BA: Mm. One question I'd like to ask you about SWE is, so, SWE is the organization that you kind of stuck with here at the U of I, during your student years. Could you talk about what do you think it is about SWE that ultimately attracted and maintained your interest over the long term?

01:31:41

AD: Mm-hmm. A couple of things. I think right off the bat, getting a leadership positions as a freshman, like a first semester freshman demonstrated to me that this an organization that believes in my potential in a tangible way. And that's not to say that other organizations didn't. But just being, you know, tossed into this position where I had so much responsibility and was given the freedom to sort of make the position my own and run these events how I choose and you know, retain the responsibility of that.

01:32:21

BA: Mm-hmm.

01:32:11

AD: That was very telling to me. I think in other organizations it probably just took a little more time but I don't know if I necessarily stuck around long enough to see that. So, that—that was just, it just happened to be one of the reasons why I stuck around. Another thing was definitely, definitely the people. And of course, [stammers] you know, you could say this about any organization, what I liked about SWE in particular was that I was exposed to different majors. If I had continued with some of the other organization that I was in—So, for example, the Daily Illini, I'd be interacting with primarily journalism majors or minors or people who are very much in that space. And not that I didn't appreciate the fact that I was meeting new people or meeting different or interesting people, it was just the breadth of different types of knowledge that I found really, really awesome about SWE. So, I probably met a large chunk of the friends that I have now through SWE.

01:33:40

BA: [overlapping] Mm-hmm. Mm-hmm.

01:33:41

AD: It's very interesting looking back and looking at all the different areas that we're going into after college and all the different things that we're studying now. Like, having a conversation about coursework with some of my friends is very difficult. [laugh] Very enjoyable, but very difficult.

01:33:55

BA: Yeah.

01:33:56

AD: Because they'll be talking about, I don't know, like gene expression and I'm like, "Jeans are pants! [laugh] What are you talking about?" Obviously, that was a joke. I know what genes are. [laugh] Nucleotides are not [stammers] Nucleotides are not laundry detergent. [laugh] I know what nucleotides are too. I took a bioinformatics class and I had to do machine learning algorithms. I know nucleotides.

01:34:24

BA: [overlapping] We believe you! [laugh]

01:34:28

AD: On gene sequences, I was like "Ah! I know a little bit of biology." I don't know any biology. But it's very, very cool, I think, having conversations with people from wildly different fields. And I just find it amazing. I'm like, "Oh, tell me about you know, this one particular technology and –" You know, we were just having a conversation this past weekend at conference, actually. One of my friends was like, "Oh, this one technology is very, very cool. It's you know, very widely applicable but for x or y reason you know, we can't immediately use it for treatment for these diseases for this and that reason."

01:35:05

BA: Mm-hmm.

01:35:06

AD: I was like, "Wow. That's pretty cool. I would have definitely not known that

[laugh] had I not had this conversation. And I definitely would not have had this conversation had I not met you through SWE." So, it's the people. It's the diversity of thought that I like a lot. And the last thing, and probably the most important to me is the diversity of different avenues of involvement. So, we have—I want to say eleven different committees, all of which are— They approach the overall mission or goal of SWE in different ways. So, we have Professional Liaison Committee, as I mentioned, which is all about connecting undergrads or whoever in SWE with whatever they want to do after. So, whether that be grad school or going into industry, you know, providing those networking opportunities, things like that.

01:36:01

BA: Mm-hmm.

01:36:02

AD: There's also community service, so if you want to get involved in SWE through volunteering or you know, charitable donations or things like that, we have an entire committee for that. Outreach is a huge committee in SWE. We, I don't even know the number of events that you know, that we host. We have a number of weekly events that we actually go to elementary schools or middle schools and you know— Schools all over the area and actually do like a little science lecture with them. Or do an activity with them. We bring people on campus, do this enormous event called IGED, Introduce a Girl to Engineering Days— IGED. Volunteering at those events as well as are really incredible because again, you, you know, you literally see how you're inspiring people to—

01:36:56

BA: Mm-hmm.

01:36:57

AD: At the very least, know that STEM is an option for girls. So, that's always incredible. We have a social committee, so we do like happy hours and fun stuff, bonding events with everybody. And membership enrichment, which is geared towards workshop and events for personal development. And we do intramurals. I joined the volleyball intramural team. [laugh] Having no experience whatsoever, so I mean to go and make a fool of myself and hopefully make some friends along the way, too. In addition to making a fool of myself.

[laugh] [stammers] But I'm like absurdly excited about the various different ways that people can get involved.

01:37:42

BA: [overlapping] Mm-hmm. Mm-hmm.

01:37:46

AD: You know, even if you just like taking pictures and you just want to be part of SWE, we have the Information and Marketing Committee. Committees, there are actually two different committees where you can be a historian. You can just attend events and take photos for us. And so, it's really the varying levels of involvement that you want. You can really just carve out your own sort of space. Or your own path in SWE according to the amount of time and the kind of involvement, too.

01:38:17

BA: Mm.

01:38:19

AD: And I think, I know that our section is absurdly lucky to have the strength in numbers that we have. The only reason we're able to have all these different events and all these different committees is because we're so large. One statistic that I like to toss around is, we're the largest, so SWE on campus, is the largest engineering RSO. Which again, is absurdly amazing to me that —

01:38:42

BA: [overlapping] Yeah. Yeah.

01:38:44

AD: You know, in a campus where we have an enormous engineering school. And again, the numbers are heavily skewed, it's still male-dominated. Just the fact that the largest engineering RSO —

01:38:59

BA: Yeah.

01:39:01

AD: Is a whole bunch of women doing awesome things.

01:39:05

BA: Yeah. [laugh]

01:39:06

AD: I love that. And we're actually you know, one of the largest collegiate sections in the country too.

01:39:12

BA: Oh, really?

01:39:13

AD: So, we, we're a very large section and we're very lucky to have the numbers that we have. And the support that we have. Not only from the departments and the College of Engineering but also from our professional sections, so the Central Illinois Professional Section, as well as our corporate sponsors. So, we're very lucky to be in the position that we are.

01:39:36

BA: Mm-hmm. It sounds like SWE definitely provides all kinds of opportunities for women engineering students to get involved and to get to know each other. Would you say that it, that it helps remediate, in a sense, the sort of sense of isolation that you referenced before? If it's not too presumptuous of me to speculate on that?

01:40:04

AD: [overlapping] Yeah. Absolutely.

01:40:05

BA: But yeah, do you think that it does fill that void and counterbalance that?

01:40:09

AD: Yeah. Absolutely. Definitely, definitely. So, I remember times when I would be sitting, very much alone in a lab in Siebel, until four in the morning, working on an assignment. And I just wanted to get this done. And then the next day, I would meet some of my friends who I met through SWE who also perhaps are in, maybe not necessarily in computer science but in a related field, so, in ECE or something. And I would just be like, "Oh you know, I spent all night in the lab." And they're like, "Oh, that's – that sucks! I mean, I was up late too! I was just, you know, sticking wires in a breadboard." Or something. And I was like, "Oh! That's great!" Like it's nice. [laugh] Nice to know that we're all you know, doing our thing, late at night, and then we can come and talk to each other about it later.

01:41:07

BA: Mm-hmm.

01:41:07

AD: So, I really, really think that I've, I really attribute a lot of getting through college to my friends and through SWE and through these organizations. Even, even WCS which I wasn't as involved in, I would, I would go and go to one event and just, you know, just feel this overwhelming sense of community.

01:41:32

BA: [overlapping] Mm-hmm. Mm-hmm.

01:41:33

AD: And one thing that I would, I would definitely say WCS helped me a lot with was technical interviews. When I was first starting out you know, applying for internships, I just reached out to one of my friends who I knew was in WCS. And she was like, "Yeah! Come over, like right now. I'm practicing technical interviews right now and I can help you out." So, I didn't actually go through the structured manner, they do have office hours where they do technical interview prep. But yeah, she was like, "You know, I have these resources for you. I'll send them over. Just come over to my apartment. We'll sit and go through some problems." So, I think and definitely like, SWE does the same. We have a whole bunch of study files. We have events and workshops for interviewing and whatnot.

01:42:25

BA: [overlapping] Mm-hmm.

01:42:27

AD: And I've truly felt an overwhelming sense of community because of the organizations I've joined. I think classes can sometimes definitely be very isolating and having that group of people to you know, if not ask for help from, at the very least go to afterwards or before or in between just for a nice like break or change of scenery or change of pace. It's definitely helped me and definitely helped with some of the you know, feelings of isolation. Or anything else.

01:43:07

BA: Yeah. Okay, I'd like to ask you a few more questions. Thank you for being so patient [laugh] through this long time. But I wanted to come back to your career goals.

01:43:23

AD: Mm-hmm.

01:43:24

BA: This is something that you already alluded to but I wonder if you could just talk to us about what you envision doing after graduating. It sounds like you have some thoughts about perhaps going to graduate school? So, yeah.

01:43:38

AD: So, my plan originally was to do grad school right after undergrad. That plan has since changed. I will be going to industry right after college. I'll be joining Microsoft. The same team that I was on in the summer so I'm very, very excited about that.

01:43:56

BA: Oh, yeah.

01:43:57

AD: And so, I'm excited about this for a couple of reasons. One is just because I'm already familiar with the project and the people. But then also, it is putting me on the path of sort of that data infrastructure that I was interested in. I do definitely see myself going back to grad school after a couple of years. Whether that be you know – I do want to do a higher in computer science as well and then perhaps something a little later down the line in terms of maybe an MBA or even maybe a JD or something. I don't know yet. [laugh] That's a little far off. But, I think what, what is really nice is that the minor that I'm in sets me up a little bit on an MBA path later down, if I chose to do that. And sort of, some of the experiences from undergrad in terms of being in a research group, and taking senior thesis and actually doing a research project and submitting a paper. That sort of helps with gearing towards like a Master's or PhD even if I choose to do that in computer science.

01:45:17

BA: [overlapping] Mm-hmm.

01:45:20

AD: So, I definitely, I will be furthering my education at some point. I know this for a fact. And then another fact that I like to tell myself, and you know, eventually further down the line, somewhere at some point I will be the boss lady of some place. [laugh] Whether that's an existing company –

01:45:47

BA: [overlapping] Mm-hmm.

01:45:48

AD: Or something of my own creation, I'm you know, I just really do believe that I have a lot to offer.

01:45:59

BA: Mm-hmm.

01:46:00

AD: And I would think aiming high is not going to be a bad thing so— That's, that's what I'm looking at right now. But, I definitely want to stay very much technical for a while. So, going into you know, a software development position was something that I was planning for a while. I do plan to go back to grad school and then see whatever happens after.

01:46:25

BA: Mm-hmm.

01:46:26

AD: Yeah.

01:46:27

BA: So, you've talked a lot about different leadership roles that you've had and you've clearly been a leader, starting in high school through college. And thinking about the leadership roles that you've had and the leadership opportunities that are available to women in engineering or more specifically, in computer science, from your perspective, what— Are there any ways in which being a woman in computing and information technology needs to change to further accommodate women in leadership?

01:47:09

AD: Hmm.

01:47:10

BA: Sorry if that's—

01:47:10

AD: [overlapping] That's a very big question. [laugh]

01:47:11

BA: Sorry about that! [laugh]

01:47:14

BA: Or what do you imagine, what do you want the future of women in computer science or computing to be?

01:47:22

AD: Mm-hmm. More.

01:47:24

BA: Mm-hmm.

01:47:25

AD: That is definitely one thing. I remember looking back at some point, I think, this was the summer after my freshman year. I was like, "Oh. Let me just see what happens if I google, you know?"

01:47:39

BA: Mm-hmm.

01:47:39

AD: [stammers] I don't remember what it was that I searched. I think it was like, "Famous Computer Scientists" and I just hit enter on Google. And at the very top there was this little carousel of images of famous computer scientists. And I went through very deliberately counting the number of men and the number of women who appeared in that search result. And it was, it was as expected, unfortunately expected. It was just a small handful of famous women computer scientists and they were all very, very old. And by that, I mean like, really, really old. Like passed away a long time ago kind of old, as well. So, it's very exciting that they're getting the recognition for being foundational in the field.

01:48:29

BA: [overlapping] Mm-hmm.

01:48:31

AD: But I was asking myself, and I remember I went up to my dad and I was

like, "Look. Look at this search result. My face is going to be there at some point."
[laugh] And he was like, "Alright. Yeah, do that." But it just occurred to me that a lot of, a lot of sort of inspiration comes from seeing people in roles that you want to eventually get to.

01:48:58

BA: Mm-hmm.

01:48:59

AD: And seeing people like you in those roles. Because that gives you, whether it's you know, a concrete or intangible, the reassurance that you can actually get there. And so, I think I looked up you know, "famous Indian women in computer science" and I don't remember if there was any you know, super prevalent, or not prevalent, I'm eating my words here. [stammers] I remember not being entirely satisfied with the search results.

01:49:32

BA: [overlapping] Mm-hmm. Mm-hmm.

01:49:35

AD: And so, I mean, it was just a very interesting, very telling moment for me that, you know, looking back sort of the most, I guess the most influential people in my college career in terms of faculty members were female computer science teachers. Who were simply there. And that told me that, you know, "Hey, you know, a woman can be standing up here teaching a class full of you know, both men and women about computer science. I can be in this field too." And so, I told myself that maybe somewhere you know, there's a little Indian girl somewhere thinking that, "Oh. There's nobody like me."

01:50:24

BA: Mm-hmm.

01:50:25

AD: Wherever it is that I want to get. So, maybe I'm not good enough or I can't do that for X and Y reason. And so I told myself, "I'm going to be stubborn and

I'm going to be that person." [laugh] So, yeah, I think there's certainly a ways to go. I think that it's really, really nice to see, even in the past three or four years that I've been involved in SWE and I've been sort, just by nature of the roles that I've had in SWE, I've had a lot of exposure to the corporate sponsors and getting to know that even over this short amount of time, the number of different employee resource groups. I keep staying research when I mean to say resource groups. Specifically, for like women in technology or women in computing. So, they'll be a giant a company, and have these groups even within those organizations, it's really, really amazing to see that companies recognize the need for those spaces and for those groups. So that we can find whatever it is, whether it's the support or the networking or the mentorship or sponsorship or whatever it is.

01:51:40

BA: [overlapping] Mm-hmm.

01:51:43

AD: It's really nice to see that over the time that I've spent with SWE, I've even seen a lot of these companies, or more of the companies that we work with have that recognition. Of you know, the need for that. And then, personally, I've been very much inspired by, there were a couple of Asian women who got C levels titles in like the last four years. And I was like following the news on that [stammers] very, very excited. I think Pinterest, if I'm not mistaken, one of their technical, like very important technical people is just – I was reading up about her and very much was inspired by that. So, yeah. I find myself inspired by those stories and I hope to be that person for some someone, somewhere. Yeah.

01:52:48

BA: Yeah.

01:52:49

AD: I forgot what the question was. [laugh]

01:52:50

BA: No, that was –

01:52:51

AD: I was just talking.

01:52:51

BA: That was great. Yeah, so it's really great to get your perspective on what you hope the future of women –

01:52:58

AD: Mm-hmm.

01:52:59

BA: ...in computing will be someday. And I wanted to ask two final questions.

01:53:07

AD: Mm-hmm.

01:53:08

BA: One has been kind of on my mind as we've been talking and I wanted to ask you about it, and if it's not a good question, feel free to say no.

01:53:17

AD: It's okay.

01:53:18

BA: Thanks. But, going back to your time in high school, when you were, you know, interested in you know, journalism, speech and debate, French and you know you mentioned that you were really drawn to the ways in which you could construct an argument.

01:53:38

AD: Mm-hmm.

01:53:40

BA: Do you find that this notion of constructing an argument still pervades your work at all?

01:53:50

AD: Hmm.

01:53:51

BA: Are you trying to make, what arguments are you trying to make with your work in computing?

01:53:56

AD: That's interesting. I think in terms of like the actual tangible output that I produce, like the code that I'm writing —

01:54:04

BA: [overlapping] Mm-hmm.

01:54:06

AD: Not necessarily, so I'm not —

01:54:08

BA: Mm-hmm.

01:54:10

AD: I don't even, wow, this is a very interesting question. I don't think I sort of think about that debate foundation for my interests at all these days. However, I do think about it a lot when I think about the extracurricular activities.

01:54:31

BA: Okay. Yeah.

01:54:32

AD: So, in SWE and in talking to other people, I think about this a lot in terms of like, what would I say?

01:54:41

BA: Mm-hmm.

01:54:42

AD: If a man asked me why we need the Society of Women Engineers? Why is that? Where is the Society of Men Engineers? And I think that the, that notion of crafting a well thought out, well-reasoned, well-articulated argument comes into play definitely less tangibly in terms of my work as a computer scientist. Definitely more tangibly in my work in addition to that. So, in my involvement, in my volunteering and outreach, and things like that. I've had conversations with people about current events in the field and whatnot and sort of being able to construct a reasonable argument and sort of convey my thoughts on that.

01:55:41

BA: Mm-hmm.

01:55:41

AD: [overlapping] A good example of that would be, there's this notion that people, some people have, that you know, women are favored in some of the computer science sort of interview processes. Or like through resume screenings or what not. They'll say like, "Oh. You're female so let's prop up your resume in one way or another." And I've had people come and ask me my perspective on that. And I find it very useful to have that, that background so that I'm able to construct a nice argument. And keep my cool while doing that. Because I think, you know, if – Honestly, if I had my way, I'd just be like, "You're ridiculous." And walk away.

01:56:24

BA: Mm-hmm.

01:56:26

AD: But I think the more valuable thing is to be like, "No. That opinion is actually quite harmful not only for you in a professional setting but also for all the women you work with. Because of x and y reason." Because I mean, of course, then you're just always second guessing their work and then that reinforces stereotypes on your end and it's harmful for them and whatnot. So, you know, having to sit down and explain the reasoning as to why my opinion is the way it is and then pointing out sort of flaws in logic. On other people's part. I think it's, those are sort of the instances where I feel the most connected back to the debate sort of feeling that I had in high school.

01:57:09

BA: [overlapping] Mm-hmm. Mm-hmm.

01:57:13

AD: Yeah. I, I think, I think will always be the case. Going forward, I will probably always carry those skills and interests and whatnot with me but not necessarily tangibly in the actual work that I do, that I'm doing.

01:57:32

BA: Mm-hmm. Alright. So, are there any other questions or topics that I might have asked you about with regards to your experience or gender and computing? I'll leave it there.

01:57:48

AD: Mm. [laugh] This was really thorough.

01:57:54

BA: [overlapping] Any final words? Or yeah, if you just have any final thoughts you want to share.

01:58:03

AD: I think, I mean, my final thought, really for anybody, and I tell this, I told this to my Engineering 100 students and I say this to people in SWE all the time, is that you know, there will be tough times. Period. But there are so many

resources available and so many people who are just really, really rooting for you. So, kind of recognizing that and taking advantage of the opportunities that you have and really, I think probably the most important thing is just believing that you can do it and that you actually do belong where ever you are. It'll go a long way. I think that's honestly how I got through college and how I'll get through the rest of my career is, you know, the firm belief that I belong. I belong and I'm smart and intelligent and driven and passionate and all of those things that, that sort of qualify me to be there. And really just to be. So –

01:59:12

BA: And one day on that Google search. [laugh]

01:59:14

AD: [laugh] Yes!

01:59:16

BA: Your face on a Google search!

01:59:17

AD: My face will pop up.

01:59:18

BA: Yes! [laugh] Well, great. Well, thank you so much Ambika, for your time and talking with me today. I really appreciate it.

01:59:27

AD: Thank you.

01:59:28

BA: And yeah, thank you.

End of interview